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BULLETIN

OF THE

TORREY BOTANICAL CLUB

DECEMBER, 1922

Miscellaneous notes on plants of Southern California—II*

PHILIP A. MUNZ AND IVAN M. JOHNSTON

LEMNA TRISULCA L.

Lemna trisulca L. Sp. Pl. 970. 1753.

This plant, reported by Abrams (Fl. Los Angeles 78. 1904) from Bear Valley in the San Bernardino Mountains and by Torrey (Pacific R. R. Rep. **4**: 142. 1856) from San Gabriel Creek, has been collected by Miss G. Corwin at the mouth of Santa Ana Canyon near Mentone, where it was found in a ditch at about 2000 feet altitude. It is, therefore, apparently to be looked for at various points along the Santa Ana River

MICROSTYLIS MONOPHYLLOS (L.) Lindl.

Ophrys monophyllos L. Sp. Pl. 947. 1753.
Microstylis monophyllos Lindl. Gen. Sp. Orch. 19. 1830.

A few typical specimens of this species, *F. W. Peirson 2271*, were collected in marshy ground at 8000 feet elevation on the South Fork of the Santa Ana River in the San Bernardino Mountains, where they grew with such plants as *Gentiana simplex*, *G. humilis*, *Parnassia cirrata*, and *Luzula comosa*. This is the first collection west of the Rocky Mountains.

Phoradendron californicum var. **distans** forma **leucocarpum** Trelease forma nova

Like the variety *distans*, but having white berries.

[The BULLETIN for November (**49**: 313–348) was issued November 9, 1922.

*The first paper of this series was published in the BULLETIN for February, 1922 (**49**: 31–44).

TYPE: Twenty-nine Palms, southern edge of Mohave Desert, May 1, 1921, *Munz 4550*, (Baker Herb. 9547).

Very conspicuous as white-fruited clumps growing in bushes of mesquite with the typical red-fruited form. Specimens of this collection were sent to Dr. Wm. Trelease who considered it worth recognition and permitted us to publish it. A second collection, *Munz 4703*, likewise on mesquite, from Andreas Canyon near Palm Springs, can also be reported.

Eriogonum nodosum var. **Jaegeri** var. nov.

With habit, inflorescence, and floral structures of the typical form of the species but with stems tomentose only below on the leaf-bearing portion, the upper parts of the stem and the inflorescence being glabrous with, at most, a little wool in the axils. Involucres glabrous or slightly floccose, the subtending bracts woolly on their inner edges.

TYPE: Dry Morongo Wash, near Hole-in-the-Wall Springs, Riverside County, November 15, 1921, *E. C. Jaeger 251* (Baker Herb. 9424).

This glabrate form of *E. nodosum* Small (Bull. Torrey Club **25**: 49. 1898) was collected at the eastern base of the San Bernardino Mountains, between 2500 and 3000 feet altitude, and well deserves recognition because of the totally different aspect as compared with the typical form. It is reported as very plentiful by its finder, Mr. Edmund C. Jaeger, one of the most active collectors of the desert flora.

Eriogonum fasciculatum var. **flavoviride** var. nov.

With capitate inflorescence and general habits of the var. *polifolium* T. & G., but lower in stature, about one foot high; light green in color instead of ashy; leaves glabrous and green above, but somewhat tomentose and pallid below; calyx glabrous without and hairy within.

TYPE: Pinyon Wells, southern edge of Mohave Desert, April 30, 1921, *Munz 4505*, (Baker Herb. 9425).

This peculiar yellowish green glabrate plant was found to be abundant in a sandy desert canyon in high Lower Sonoran Zone above Pinyon Wells. It was associated all along the canyon with var. *polifolium*, but was very distinct from this in size and color. We have seen also material from Cottonwood Pass, *Hall 6003*, about fifteen miles to the southeast and in the same general mountain range; here too it grew with var. *polifol-*

ium but was smaller and earlier in anthesis. The relation of this glabrous variety to var. *polifolium* is analogous to that existing between typical *E. fasciculatum* and the pubescent var. *foliolosum*.

ALLIONIA PUMILA Standley

Allionia pumila Standley, Contr. U. S. Nat. Herb. **12**: 345. 1909.
Allionia Brandegei Standley, *l. c.* 346.

The only *Allionia* hitherto reported from California is *A. Brandegei*, the type of which came from the Providence Mountains in the eastern part of the Mohave Desert. Two collections recently made by F. W. Peirson in the San Bernardino Mountains are of this species, which has recently been included in *A. pumila* by Standley (No. Am. Flora **21**: 226. 1918). These collections not only extend the range of this species to the western part of the desert but even into the coastal drainage. One (*Peirson 2257*) from the Santa Ana River, at 4500 feet elevation, is twice as tall as the type of *A. Brandegei* and has the leaves broadly ovate and cordate, rather than oblong and scarcely cordate. The other plant (*Peirson 1850*), from Cushenberry Grade, is more like Brandegee's type collection, being about ten inches high and with leaves ovate to oblong.

ALLIONIA NYCTAGINEA Michx.

Allionia nyctaginea Michx. Fl. Bor. Am. **1**: 100. 1803.
Allionia ovata Pursh, Fl. Am. Sept. 97. 1814.

The ovate-leaved form of the above species was found in June, 1919, to be locally established along a siding of the Santa Fe Railroad about a mile west of Upland, *Johnston 2169*. Examination of the locality in January, 1922, showed the colony to have been destroyed by the oil spray used by the railroad for weed destruction. This is apparently the first record for the state.

Scopulophila Rixfordii (Brandegee) comb. nov.

Achyronychia Rixfordii Brandegee, Zoe **1**: 230. 1890.
Scopulophila nitrophiloides Jones, Contr. W. Bot. **12**: 5. 1908.
Eremolithia Rixfordii Jepson, Fl. California 499. *f. 100*. 1914.

This odd desert plant seems to be generically distinct from *Achyronychia*, but Jones's *Scopulophila* has precedence over the much later generic name *Eremolithia* of Jepson.

Claytonia lanceolata var. **Peirsonii** var. nov.

As in the typical form of the species, but with peduncle and primary axis of inflorescence shortened so as to make the flowers appear umbellate.

TYPE: near Kelly's Cabin on Ontario Ridge, San Gabriel Mountains, at 8200 feet altitude, May 29, 1920, *F. W. & Mabel Peirson* (Baker Herb. 10524).

Known only from the eastern portion of the San Gabriel Mountains where, beside the type, we have seen a collection, *F. W. Peirson 2151*, from the Devil's Backbone at 7000 feet altitude. It is probable that this variety will necessitate a reconsideration of the status of *C. umbellata* Wats. (Bot. King Exp. 43. *pl. 6, f. 4–5.* 1871) of the northeastern part of California, for the principal character of that species is the same umbellate inflorescence that characterizes our variety. The new variety, however, may be told from *C. umbellata* by its shorter-petioled, broader leaves, which are widest below the middle (instead of above), and by its shorter stem, larger flowers, and isolated southern range.

THLASPI ARVENSE L.

Thlaspi arvense L. Sp. Pl. 646. 1753.

This crucifer, common in the Rocky Mountain region, can now be reported from Southern California (*F. W. Peirson 66*) at Henniger's Flats near Pasadena. The only other collection we have seen from California is by Chase from Adin, in Modoc County.

Draba corrugata var. **saxosa** (Davidson) comb. nov.

Draba saxosa Davidson, Bull. So. Cal. Acad. **19**: 11. 1920.

The phase of *Draba corrugata* that is found on San Jacinto Peak may well be deserving of a varietal name, but scarcely of a specific one. As pointed out in another paper (Johnston, Pl. World **22**: 88. 1919) the San Jacinto plant differs only in matters of degree and is closely simulated by some collections from the San Bernardino Mountains.

Sphaeralcea rosacea sp. nov.

A shrubby perennial forming loose clumps 10–15 dm. high; stems ashy, stellate-tomentose, slender, ascending, virgate; leaves remote, ovate- or oblong-cordate and somewhat three-lobed, doubly crenate, stellate-pubescent but greener above, blade usually 2–2.8 cm. long and 1.5–2.5 cm. wide, petioles 12–20 mm. long; inflorescence a very loose open panicle 2–4 dm. long, the ascending branches remote and one- to four-flowered; calyx stellate-tomentose, at anthesis 8–11 mm. high and 5–7 mm. wide, with lanceolate or oblong-lanceolate lobes, at fruiting 10–14 mm. long, bractlets setaceous, deciduous, 4–7 mm. long; pedicels 3–20 mm. long; petals pinkish when fresh but drying a rose-violet, 17–21 mm. long, claw densely villous-ciliate; fruit much depressed, stellate-pubescent; carpels one-seeded, about 3.5 mm. high, oblong in outline, sides smooth or at least not reticulate, seminiferous only below, the upper half thinner and scarious.

TYPE: Palm Springs, April 2, 1917, *Alice B. Chittenden* (Herb. Cal. Acad.).

A very ornamental species that is known to us only from the vicinity of Palm Springs, Riverside County, where it is a common plant in rocky ground in the canyons opening into the Colorado Desert. Besides the type we have seen a collection by Parish, No. 4109, and one by Johnston. This plant is the "purple-flowered form of *S. ambigua*," which is mentioned by Robinson (Synop. Fl. 1: 315. 1897) in his review of the genus. Though it has long passed as a form of *S. ambigua*, it is amply distinct and probably not even an immediate relative of that species, differing from it in habit and stature; in size, color and disposition of flowers; and in shape and texture of leaves. When we first saw the two species growing together, as they commonly do about Palm Springs, we never once thought of associating the two plants under one name; in fact, basing determination on superficial resemblances, the new species was taken to be a species of *Malvastrum*. The proposed species bears a considerable resemblance to certain of the shrubby malvastrums, having more or less woody stems and similarly colored flowers, but the technical characters of the carpels definitely ally it with *Sphaeralcea*.

VIOLA SHELTONI Torr.

Viola Sheltoni Torr. Pac. R. R. Rep. 4: 67. *pl. 2.* 1856.

Locally common on moist, shaded, oak-covered canyon-sides in the upper chaparral belt on the south slope of the San Antonio Mountains, where specimens have been collected in Charcoal Fork of Cucamonga Canyon, at 4200–4500 feet altitude, *Johnston 1303*, and near Brown's Flats, at 4200 feet, *Johnston 1759*. The specimens appear the same, character for character, as the common plant of Mendocino and Siskiyou Counties. The plant was known to range as far south as Mariposa County, where it was collected by Congdon, but between that station and the one in Southern California, which we now report, there lies a gap of over 280 miles in which the plant is not known to occur. This station for *V. Sheltoni* was announced as *V. lobata* by Johnston (Bull. So. Calif. Acad. **17**: 65. 1918).

OENOTHERA SPECIOSA Nutt.

Oenothera speciosa Nutt. Jour. Acad. Phila. **2**: 119. 1821.

Hartmannia speciosa Small, Bull. Torrey Club **23**: 181. 1896.

Well established along Chino Creek, from Pomona to near the confluence with the Santa Ana River. First collected several years ago by Johnston. Recently the following specimens have been collected near Pomona, all in moist soil along the stream: *Mrs. Lenington, Munz 4680, 4560.* These discoveries add a new species and subgenus of *Oenothera* to the flora of California. Our material is atypical in its rounded instead of obcordate petals and in being taller, some of the specimens attaining a height of four feet.

Oenothera cardiophylla var. **splendens** var. nov.

A large flowered variation with hypanthium two-thirds as long as the capsule and 20–25 mm. long; petals 15 mm. long.

TYPE: high among rocks at the foot of The Needles, Colorado River, March 7, 1910, *Grinnell* (Univ. Calif. Herb. 196590).

A very remarkable variation of the species and, because of its large flowers, probably of ornamental value. We know of but two collections, the one from The Needles by Grinnell and the other from the Chocolate Mountains by Childs. The foliage and habit of the plant are those characteristic of the species. No doubt some will consider this distinct enough for a species, but we are deterred from publishing it as such because of the immense amount of variation in the floral structures of typical *O. cardiophylla*, of which this seems only to be a remarkable extreme.

CHIMAPHILA UMBELLATA (L.) Nutt.

Pyrola umbellata L. Sp. Pl. 396. 1753.
Chimaphila umbellata Nutt. Gen. **1**: 274. 1818.
Chimaphila occidentalis Rydb. No. Am. Flora **29**: 30. 1914.

This species can now be reported from Southern California, having been collected in the Dollar Lake region of the San Bernardino Mountains at 8750 feet altitude, *F. W. Peirson 829*. This discovery and that of *Pyrola picta* Smith, *Johnston 2860*, add two species of Pyrolaceae to the list prepared by Parish (Pl. World **20**: 247. 1917) for the San Bernardino mountains.

Asclepias eriocarpa var. **microcarpa** var. nov.

Follicles 3–4 cm. long; seeds 5 mm. long; coma 15 mm. long; pedicels 2–3.5 cm . long; in flowers and vegetative parts like the typical form of the species.

TYPE: North Fork of Deep Creek, San Bernardino Mountains, on a sunny hillside at 6000 feet altitude, July 17, 1921, *I. M. Johnston 2833* (Baker Herb. 9563.)

This variety is the form of the species frequent through the pine belt of the San Bernardino Mountains and differs from the typical form, which is not uncommon on the plains at the foot of the mountains, in its much smaller follicles. Many plants of the valley-inhabiting *A. eriocarpa* Benth. have been seen by the authors, but none have been noted which failed to have fruit much larger than in the variety here described. *A. eriocarpa* has follicles 8–10 cm. long on pedicels 4–6 cm. long, while the seeds measure about 8 mm. in length and have a coma 24 mm. long.

The small follicles can not be attributed to the blighting action of frost, for all produce perfect seeds and in all colonies seen the fruit was uniform in size and as here described. Further exploration may reveal the fact that the pine-belt form of *A. eriocarpa* found in the San Jacinto and San Gabriel Mountains is also referable to this variety; fruiting material from these ranges is lacking.

Phlox bernardina sp. nov.

Phlox dolichantha Brand; Engler, Pflanzenreich 4^{250}: 67. *f. 18, A-D.* 1907; Nels. W. Am. Phloxes 28. 1898; Milliken, Univ. Cal. Pub. Bot. **2**: 65. 1904. Not *P. dolichantha* Gray, Proc. Am. Acad. **22**: 310. 1887.

TYPE: in open pine forest, 6000 feet altitude, Bear Valley, June 1886, *Parish 1818*, (Univ. Calif. Herb. 194015).

The new species indicated here is the plant from the San Bernardino Mountains that has been known as *P. dolicantha*. The type of *P. dolichantha* Gray, however, came from the Pahrangat Mountains in southern Nevada and is evidently a form of what has been called *P. Stansburyi brevifolia* and *P. superba*. In the recent treatments of *Phlox* by E. Nelson, Milliken, and Brand, the plant from the San Bernardino Mountains has usurped the name of *P. dolichantha* to the exclusion of the original Nevada plants. *P. bernardina* differs from *P. dolichantha* and its immediate relatives in its very elongated corolla-tube, which is over four, instead of less than three, times the length of the calyx; in having its stems not shrubby below but herbaceous to the ground; and in its habitat, which is not at low altitudes in desert mountains but in the open pine forests of the San Bernardino Mountains. The new species is separated from its nearest relative by over 100 miles. It is known only from San Bernardino Mountains and appears to have been collected there in Bear Valley only.

NAMA HUMIFUSUM Brand

Nama humifusum Brand, Beiträge Hydrophyll. 9. 1911.

In Southern California this species has been known only from the three localities (Soldiers' Home, Los Angeles County, and Diamond Lake and Sweetwater Valley in San Diego County) given by Brand in the Pflanzenreich (4^{251}: 146. 1913); the plant, however, may be reported from Laguna Canyon in Orange County, where it was collected in May, 1919, *Munz, Street, & Williams 2681*.

LYCIUM SPENCERAE Macbride

Lycium Spencerae Macbride, Contr. Gray Herb. 53: 18. 1918.

The type of this species proves to be a flowering specimen of *Prunus fasciculata* (Torr.) Gray (Proc. Am. Acad. **10**: 70.

1874). The identifying of this lycioid almond with *L. Spencerae* adjusts for local botanists the problem of explaining how so distinct a species, as this *Lycium* seemed to be, could so long go undetected in a locality so frequently visited as Cajon Pass. We are under obligations to Mr. F. Macbride for making at the Gray Herbarium the comparisons necessary for the establishing of the identity of the two species.

Penstemon Clevelandi var. **connatus** var. nov.

With habit of growth and flowers of the species, but with leaves jagged-serrate, usually glabrous and with at least the four upper pairs connate-perfoliate.

TYPE: near Van Deventers, southeastern base of the San Jacinto Mountains, June 1901, *H. M. Hall 2149* (Univ. Calif. Herb. 54999).

A very well marked variation that is apparently restricted to the eastern (Colorado Desert) base of the San Jacinto Mountains. Referable to this variety are the following: *Hall 1160* from the type locality, *Parish Bros. 1216* and *Johnston*, April, 1917, from near Palm Springs. The most evident relationship is with the variety *Stephensi* of the eastern Mohave Desert, the new variety agreeing in its foliar characters but differing in its somewhat smaller corolla and beardless sterile stamens. In our recent discussion of the var. *Stephensi* (Bull. Torrey Club **46**: 41. 1922) the specimens of *P. Clevelandi* Gray mentioned as simulating that variety in habit are in fact referable to var. *connatus*.

P. Clevelandi in its typical form occurs along the desert borders to the south of the range of the var. *connatus*. The northernmost locality seen for it is Coyote Canyon, *Hall 2766*. In the typical form the leaves are entire or rarely remotely dentate, never glaucous and are entirely free or, at most, only partially joined and not completely fused, with the suture line obliterated as in the variety.

Galium angustifolium var. **pinetorum** var. nov.

A low herbaceous perennial, stems 2–4 dm. high, simple, erect, tufted or arising from along short, prostrate, persistent, subterranean stems.

TYPE: Sierra Madre Mountains, Los Angeles County, 1893, *A. Davidson* (Univ. Calif. Herb. 28169).

A variety of the pine-belt and differing from the typical form of the species only in habit of growth. Additional specimens referable to this variety are the following: Santa Lucia Mountains, *K. Brandegee*, on the north, and Cuyamaca Mountains, *T. S. Brandegee*, July 7, 1894, on the south. Plants from the San Jacinto Mountains, *Hall 2509*, have the growth-habit of the variety, but are strictly branched and become 5–7 dm. high. The variety has been mentioned without a formal name by Johnston (Pl. World 22: 118. 1919).

Galium Hallii sp. nov.

Dioecious perennial, shrubby at the base, with relatively few long (4–6 dm.) decumbent quadrangular stems, younger stems short-hispid, older stems glabrate and with a shiny exfoliating papery bark; leaves in fours, hirsute like the branchlets, light green, ovate-elliptical to elliptical, 5–11 mm. long, sessile, margins strongly revolute, midvein strong, lateral veins weak or absent; flowers borne in loose leafy clusters on the conspicuously and gracefully recurved tips of the branchlets, yellowish, about 2 mm. in diameter, bearing a few stiff hairs; fruit black, slightly juicy, body 3 mm. in diameter, covered with dense villous hairs of 2 mm. length.

TYPE: Coldwater Fork of Lytle Creek, San Gabriel Mountains, in gravelly ground at 5200–5700 feet altitude, July 7, 1918, *Johnston 2067* (Univ. Calif. Herb.).

Specimens examined: Coldwater Fork of Lytle Creek, San Gabriel Mountains, 5500 ft. alt. *Johnston 1667;* Lytle Creek, 5750 ft. alt., *Hall 1227;* Rock Creek Canyon, San Gabriel Mountains, *Abrams & McGregor 598;* Seymour Creek, Mt. Pinos region, 6700 ft. alt., *Hall 6505;* Tehachepi, 1889, *Greene;* Erskin Creek, 4–5000 ft. alt., *Purpus 5349*,

This is a remarkably clear-cut undescribed species of the *G. multiflorum*-alliance that has been confused with *G. multiflorum*, *G. stellatum*, and *G. occidentale;* from all of these it certainly differs and can be distinguished by its nodding flower-clusters. The plant has been recognized as distinct for several years, and the increasing material at hand seems to justify its description as a new species. It has been treated as "*Galium* sp." by Johnston (Pl. World 22: 118. 1919).

The range is eminently a natural one, for the plant occurs at and just below the lower limits of the pine belt in the rocky canyons that open into the extreme western portion of the Mohave

Desert. The type locality, the southernmost known station, is almost on the Los Angeles—San Bernardino County line; from this point the range extends northward to Erskin Creek in the Sierra Nevada of Kern County.

It might be mentioned here that *G. occidentale* McClatchie (Erythea **2**: 124. 1894) is a trivial form of *G. californicum* H. & A., and that *G. grande* McClatchie (*l. c.*) is indistinguishable from *G. pubens* Gray. These identities are established by a study of authentic specimens.

BAHIA DISSECTA (Gray) Britton

Amauria dissecta Gray, Mem. Am. Acad. II. **4**: 104. 1849.
Bahia dissecta Britton, Trans. N. Y. Acad. Sci. **8**: 68. 1888.
Villanova dissecta Rydb. Bull. Torrey Club **37**: 333. 1910.
Amauriopsis dissecta Rydb. No. Am. Flora **34**: 37. 1914.

The first collection of this species to be reported from the state was made in the San Bernardino Mountains, *F. W. Peirson 2245*, along the Santa Ana River, at 6500 feet elevation, August 24, 1920.

POMONA COLLEGE
CLAREMONT, CALIFORNIA